

Case 3066

***Macrophya* Dahlbom, 1835 (Insecta, Hymenoptera): proposed designation of *Tenthredo montana* Scopoli, 1763 as the type species; and *Tenthredo rustica* Linnaeus, 1758; proposed conservation of usage of the specific name by the replacement of the syntypes with a neotype**

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Abstract. The purpose of this application is to conserve the understanding of the name *Macrophya* Dahlbom, 1835, which has been used for a genus of sawflies included in the family TENTHREDINIDAE (tribe MACROPHYINI) since its original publication. However, in 1934 the name of the type species of the genus, *Tenthredo rustica* Linnaeus, 1758, was transferred to a species of sawfly included in the genus *Arge* Schrank, 1802 (family ARGIDAE), thereby formally rendering the name *Macrophya* a junior subjective synonym of *Arge*. It is proposed that *Tenthredo montana* Scopoli, 1763 be designated as the type species of *Macrophya* in accord with the long-established and universal usage of the generic name. It is also proposed that the name-bearing status of the syntypes of *Tenthredo rustica* Linnaeus, 1758 be set aside and a neotype designated in accord with the use since 1934 of the specific name for a well-known and widespread species of *Arge*.

Keywords. Nomenclature; taxonomy; Hymenoptera; TENTHREDINIDAE; MACROPHYINI; ARGIDAE; sawflies; *Macrophya*; *Macrophya montana*; *Arge rustica*.

1. Dahlbom (1835, pp. 4, 11) established the name *Macrophya* for a subgenus of the sawfly genus *Tenthredo* Linnaeus, 1758. The subgenus included 12 nominal species, among them '*Tenthredo (Macrophya) rustica*'. Dahlbom did not characterise the species, nor give an authorship and date for the name.

2. Westwood ([1839], p. 53) designated '*T. rusticus* Linn[aeus]. Pz.64.10' as the type species of *Macrophya*. Westwood's type species designations were accepted in Opinion 71 (January 1922) and Direction 32 (May 1956), and the dates of the parts of his publication were set out in Direction 63 (June 1957).

3. The notation 'Pz.64.10' refers to Panzer's ([1799], pl. 10) description of his new species *Tenthredo notata* from Austria, which undoubtedly represents the female of the species that was called *Macrophya rustica* until the publication of Malaise & Benson (1934), that is, the species now called *Macrophya montana* (Scopoli, 1763) (see para. 4 below).

4. On the basis of the original description by Linnaeus (1758, p. 556), Malaise & Benson (1934, pp. 4-5) pointed out that *Tenthredo rustica* Linnaeus, 1758 is not the species which was for a long time called *Macrophya rustica* by authors but is a species of the genus *Arge* Schrank, 1802. Malaise & Benson (1934) discussed the type

material of *Tenthredo rustica* Linnaeus from Linnaeus's collection in London and noted:

'There are 5 (females) of the species now known as *Macrophya rustica* (Linné): 1 (female) unlabelled, 2 (females) labelled 'n. 141', and 2 (females) labelled 'simillimus rusticae sed distincta angl. B. Clark'.

But these specimens do not agree with the original description of 1758, which is repeated in *Fauna Suecica* (1761), in which the species described comes under the heading 'Antennis subclavatis continuis, nec articulatis' and the description reads 'abdomine nigro; cingulis quattuor flavis'. *Arge atrata* (Forster, 1771) is the only Swedish species which fits this description.

In the later description of 1767, Linné places the species in a group by itself under the heading 'Antennis subclavatis, articulatis', with the word 'nec' accidentally omitted before 'articulatis'; there can be doubt about this and if this is recognised the descriptions of 1758 and 1767 tally. In no other instance has Linné spoken of the antennae as being segmented without indicating how much so, i.e. 'plurimis articulatis' or '7 and 8 articulis', etc. The omission of the word 'nec' in 1767 is not sufficient evidence for saying that Linné made a mistake in 1758 and that he really was describing a *Macrophya* with 7-segmented flagellum. *Arge atrata* (Forster, 1771) must become *Arge rustica* (Linné, 1758), and *Macrophya rustica* auct., nec Linné, therefore becomes *Macrophya montana* (Scop.) (*Tenthredo montana* Scopoli 1763).

5. On the basis of Linnaeus's (1758) description, Malaise & Benson (1934) referred the name *Tenthredo rustica* Linnaeus, 1758 to a species of *Arge* (family ARGIDAE), and not to a species of *Macrophya* (family TENTHREDINIDAE). The loss of the specific name of *Tenthredo atrata* Forster, 1771 (p. 80), the transfer of the name *rustica* from the one species to the other, and the introduction of the name *montana* Scopoli, 1763 in place of *rustica* as hitherto understood, caused confusion in the use of the specific names of two common European sawfly species. In a few cases *Macrophya rustica* continued to be used as a valid name (see, for example, Mucho, 1968, p. 14; Scobiola-Palade, 1978, p. 222), probably because these authors were unaware of the paper by Malaise & Benson (1934). However, Malaise & Benson's nomenclatural arrangement has now been widely accepted.

6. It is not immediately clear which species Dahlbom (1835) understood as *Tenthredo (Macrophya) rustica* when proposing the name *Macrophya* because he neither described the species nor mentioned the author of the name (para. 1 above). The species is merely listed, followed by several names of Scandinavian locations. However, the other species listed under *Macrophya* by Dahlbom indicate beyond all doubt what he understood as this subgenus: *Tenthredo duodecimpunctata* Linnaeus, 1758, *T. blanda* Fabricius, 1775, *T. albicincta* Schrank, 1776, *T. albipuncta* Fallén, 1804, *T. ribis* Schrank, 1781, *T. neglecta* Klug, 1814 (currently *Macrophya annulata* (Geoffroy, 1785)), *T. strigosa* Fabricius, 1798 (currently *M. rufipes* (Linnaeus, 1758)), *T. punctum* Fabricius, 1781 (currently *M. punctumalbum* (Linnaeus, 1767)), *T. quadrimaculata* Fabricius, 1781 (a senior synonym of *M. sanguinolenta* (Gmelin, 1790)), *T. rapae* Linnaeus, 1767 and *T. variegata* Fabricius, 1808. The last two species are currently included in *Pachyprotasis* Hartig, 1837, a related member of the tribe MACROPHYINI in the TENTHREDININAE. In the generic key for *Macrophya*, Dahlbom (1835, p. 4) used a character ('coxis posticis maximis') which is still used

today to differentiate the MACROPHYINI from other tribes of the TENTHREDININAE. Furthermore, he distinguished (p. 3) species of *Macrophya*, including *rustica*, from members of the genus *Hylotoma* Latreille, 1803 (a junior synonym of *Arge* Schrank, 1802) by 'Antennae subsetaceae aut subfiliformis ... Antennae articulis 9', whereas *Hylotoma* species were characterised by the conspicuous shape of the antennae ('Antennae subcylindricae, mediocres, articulis 3'). Thus from the content of his work it is evident that Dahlbom (1835) interpreted *Tenthredo rustica* Linnaeus, 1758 as a species of *Macrophya*.

7. It is also evident from Westwood's ([1839]) type designation (para. 2 above) that he interpreted the type species '*T. rusticus* Linn. Pz. 64.10' in the sense of Panzer ([1799]), i.e. as a species of *Macrophya*.

8. The description of *Tenthredo montana* Scopoli, 1763 (pp. 276–277, fig. 724), which was based on a pair of specimens captured in copulation 'in montanis districtis Idriensis' (Slovenia), leaves no doubt that the species is the same as *Macrophya rustica* as understood before 1934, i.e. a species of *Macrophya*.

9. The generic name *Macrophya* Dahlbom, 1835 is used in the sense of *Tenthredo rustica* as understood before 1934 (i.e. *Tenthredo montana* Scopoli, 1763), and not in the sense of Linnaeus's (1758) description. Authors have been aware of the problem of the type species of *Macrophya* but so far none has proposed a solution. Smith (1979, p. 120) wrote: 'Type species: *Tenthredo rusticus* [recte *rustica*] Linnaeus Design. by Westwood, 1840 [recte 1839]. *T. rusticus* in sense of authors at that time'; Gibson (1980, p. 15) noted: '*Tenthredo rusticus* auct. nec. Linnaeus = *Macrophya montana* (Scopoli). By subsequent designation by Westwood, 1840'; and Abe & Smith (1991) recorded: '*Tenthredo rusticus* auct., nec. Linnaeus (Designated by Westwood, 1840)'.

10. The genus *Macrophya* comprises more than 150 species and has a wide range of distribution. The name is cited by many authors; virtually every work on the sawfly fauna of Europe or the Mediterranean area includes at least one, and usually several, *Macrophya* species because they are comparatively abundant and can be collected easily from flowers, particularly *Macrophya montana* from flowers of the family Apiaceae (alternatively known as Umbelliferae). Members of the genus *Macrophya* are widespread in the Western Palaearctic (see, for example, Muche, 1968; Ermolenko, 1977; Magis, 1985; Zhelochovtsev, 1988; Lacourt, 1991; Chevin, 1995; Blank et al., 1998; and Taeger et al., 1998), the Eastern Palaearctic (see, for example, Naito, 1978; Inomata & Shinohara, 1993; Shinohara, 1997; and Wei & Ma, 1997), the Nearctic (see, for example, Gibson, 1980; and Smith, 1991), and the Indian subcontinent (see, for example, Singh & Saini, 1989; Saini, Bharti & Singh, 1996). A representative list of a further 24 references, mainly of taxonomic works from the past 20 years, which demonstrate the usage of the name *Macrophya*, is held by the Commission Secretariat. Recognition that as a consequence of Malaise & Benson's (1934) nomenclatural rearrangement the name *Macrophya* Dahlbom, 1835 (family TENTHREDINIDAE) becomes a junior subjective synonym of *Arge* Schrank, 1802 (family ARGIDAE), and that a new name is needed for the genus *Macrophya* as always understood, would cause considerable confusion.

11. In order to maintain the original and current usage of the name *Macrophya*, in the interest of stability of nomenclature, we propose that *Tenthredo montana* Scopoli, 1763 be designated the type species of *Macrophya*. As stated in para. 8 above, this is the taxonomic species which before 1934 was called *M. rustica*.

12. Since 1934 (Malaise & Benson's publication), the specific name of *Tenthredo rustica* Linnaeus, 1758 has been used for a well-known and widespread species of *Arge* Schrank, 1802, which was formerly known as *Arge* (or *Hylotoma*) *atrata* (Forster, 1771) (see paras. 4 and 5 above). To ensure the continuing clarity, security and stability of uniform usage of *Arge rustica* (Linnaeus, 1758) we propose that the syntypes (see para. 4 above) be set aside and that a neotype be designated in accord with the current usage of the name. The proposed female neotype is labelled as follows: '*Hylotoma atrata* Forst. Schwerin'; 'coll. Konow'; 'Neotype [female] *Tenthredo rustica* Linné, 1758'; '*Arge rustica* (Linné) [female] det. Blank & Taeger 1999'. It is deposited in the collection of the Deutsches Entomologisches Institut, Eberswalde, Germany. The species can be identified unambiguously using the keys of Enslin (1917, in which it is named *Arge atrata*), Gussakovskij (1935), Benson (1951), Ermolenko (1975, figs. 63–64 which show illustrations of both male and female specimens), Muche (1977) and Quinlan & Gauld (1981). *Arge rustica* (including the neotype) is unique among European species of the genus *Arge* in the conspicuous colour pattern of the abdomen of females (abdomen black, tergum 1 and terga 3–5 with light pattern). A representative list of a further 16 references, dating from 1957 to 1998, which demonstrate the current usage of the specific name *rustica* for a species of *Arge* is held by the Commission Secretariat.

13. The International Commission on Zoological Nomenclature is accordingly asked:

(1) to use its plenary powers:

(a) to set aside all previous designations of type species for the nominal genus *Macrophya* Dahlbom, 1835 and to designate *Tenthredo montana* Scopoli, 1763 as the type species;

(b) to set aside all previous type fixations for the nominal species *Tenthredo rustica* Linnaeus, 1758 and to designate the female specimen in the Deutsches Entomologisches Institut, Eberswalde, Germany, referred to in para. 12 above, as the neotype;

(2) to place on the Official List of Generic Names in Zoology the name *Macrophya* Dahlbom, 1835 (gender: feminine), type species by designation in (1)(a) above *Tenthredo montana* Scopoli, 1763;

(3) to place on the Official List of Specific Names in Zoology the following names:

(a) *montana* Scopoli, 1763, as published in the binomen *Tenthredo montana* (specific name of the type species of *Macrophya* Dahlbom, 1835);

(b) *rustica* Linnaeus, 1758, as published in the binomen *Tenthredo rustica* and as defined by the neotype designated in (1)(b) above.

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References

Abe, M. & Smith, D.R. 1991. The genus-group names of Symphyta (Hymenoptera) and their type species. *Esakia* (Fukuoka), 31: 1–115.

- Benson, R.B. 1951. Hymenoptera. Symphyta. *Handbooks for the identification of British insects*, vol. 6, part 2(a). Pp. 1–49. Royal Entomological Society of London, London.
- Blank, S.M. et al. 1998. Checkliste der Pflanzenwespen Deutschlands (Hymenoptera: Symphyta). Pp. 13–34 in Taeger, A. & Blank, S.M. (Eds.), *Pflanzenwespen Deutschlands (Hymenoptera: Symphyta)*. Kommentierte Bestandsaufnahme. Goecke & Evers, Keltern.
- Chevin, H. 1995. Biologie de *Macrophya punctumalbum* (Linné) (Hymenoptera: Symphyta, Tenthredinidae). *L'Entomologiste*, Paris, **51**(6): 279–285.
- Dahlbom, G. 1835. *Conspectus Tenthredinidum, Siricidum et Oryssinorum Scandinaviae, quas Hymenopterorum familias*. 16 pp. Hafniae.
- Enslin, E. 1917. Die Tenthredinoidea Mitteleuropas VI. *Deutsche Entomologische Zeitschrift*, (N.F.), Berlin, (Beiheft 6): 539–662.
- Ermolenko, V.M. 1975. Rogochvosti ta pil'shiki. Tentrepopodibni pil'shiki. Argidi. Diprionidi. Tentreidinidi (Selandriini, Dolerini). *Fauna Ukraini*, Kiev, **10**(3): 1–374.
- Ermolenko, V.M. 1977. New species of sawflies-tenthredinids (Hymenoptera, Tenthredinidae) from Talysh [*Macrophya (Pseudomacrophya) nizamii*]. *Vestnik Zoologii*, Kiev, **5**: 69–74.
- Forster, J.R. 1771. *Novae Species Insectorum Centuria 1*. vi, 100 pp. Davies, London.
- Gibson, G.A.P. 1980. A revision of the genus *Macrophya* Dahlbom (Hymenoptera: Symphyta, Tenthredinidae) of North America. *Memoirs of the Entomological Society of Canada*, **167**: 135–138.
- Gussakovskij, V.V. 1935. Insectes Hyménoptères, Chalastrogatra 1. *Fauna SSSR*, Moskva, Leningrad, **2**(1): 1–453.
- Inomata, R. & Shinohara, A. 1993. *Macrophya koreana* (Hymenoptera, Tenthredinidae) found in Japan, with the first record of host plant. *Japanese Journal of Applied Entomology and Zoology*, **61**(4): 718.
- Lacourt, J. 1991. Revision des *Macrophya* du groupe *punctumalbum* (L.) (sous-genre *Pseudomacrophya* Enslin 1913) en Europe et Africa du nord (Hymenoptera, Tenthredinidae). *L'Entomologiste*, Paris, **47**(3): 139–148.
- Linnaeus, C. 1758. *Systema Naturae*, Ed. 10, vol. 1. 824 pp. Salvii, Holmiae.
- Linnaeus, C. 1761. *Fauna Suecica*, Ed. 2. 578 pp. Salvii, Holmiae.
- Linnaeus, C. 1767. *Systema Naturae*, Ed. 12, vol. 1, part 2. Pp. 531–1327. Salvii, Holmiae.
- Magis, N. 1985. Faunistique des Macrophyini de la Belgique et du Grand-Duché de Luxembourg (Hyménoptères: Tenthredinidae). 5. Conclusions générales. *Bulletin de la Société Royale des Sciences*, Liège, **54**(6): 363–371.
- Malaise, R. & Benson, R.B. 1934. The Linnean types of sawflies (Hymenoptera, Symphyta). *Arkiv för Zoologie, Stockholm*, **26A**(20): 1–14.
- Muche, W.H. 1968. Die Blattwespen Deutschlands. I. Tenthredininae. *Entomologische Abhandlungen Staatliches Museum für Tierkunde in Dresden*, **36**(1) (Supplement): 1–58.
- Muche, W.H. 1977. Die Argidae von Europa, Vorderasien und Nordafrika (mit Ausnahme der Gattung *Aprosthemina*) (Hymenoptera, Symphyta). *Entomologische Abhandlungen Staatliches Museum für Tierkunde in Dresden*, **41** (Supplement): 23–59.
- Naito, T. 1978. Chromosomes of the genus *Macrophya* Dahlbom (Hymenoptera, Tenthredinidae). *Kontyû*, Tokyo, **46**(3): 470–479.
- Panzer, G.W.F. [1799]. *Faunae Insectorum Germanicae initia oder Deutschlands Insecten*, vol. 64, pls. 1–24. Felssecker, Nürnberg.
- Quinlan, J. & Gauld, I.D. 1981. Symphyta (except Tenthredinidae). Hymenoptera. New edition. *Handbooks for the identification of British insects*, vol. 6, part 2a. Pp. 1–67. Royal Entomological Society of London, London.
- Saini, M.S., Bharti, H. & Singh, D. 1996. Taxonomic revision of genus *Macrophya* Dahlbom (Hymenoptera, Symphyta, Tenthredinidae, Tenthredininae) from India. *Deutsche Entomologische Zeitschrift*, (N.F.), Berlin, **43**(1): 129–154.
- Scobiola-Palade, X.G. 1978. Hymenoptera, Symphyta, Tenthredinoidea, Fam. Tenthredinidae — Subfam. Selandriinae, Tenthredininae, Heterarthrinae. *Fauna Republicii Socialiste România, Insecta*, Sofia, **9**(8): 1–244.
- Scopoli, J.A. 1763. *Entomologia Carniolicæ ...* [36], 420 pp. Trattner, Vindobonae.

- Shinohara, A.** 1997. The type material of Japanese *Tenthredo* and *Macrophya* sawflies (Hymenoptera, Tenthredinidae) described by A. Mocsáry and R. Malaise. *Bulletin of the National Science Museum, Tokyo, (A, Zoology)*23(3): 165–175.
- Singh, D. & Saini, M.S.** 1989. Transfer of the species *Macrophya lucida* from *Macrophya* to *Tenthredo* (Hymenoptera, Tenthredinidae). *Journal of Entomological Research, New Delhi*, 13(1–2): 146.
- Smith, D.R.** 1979. Suborder Symphyta. Pp. 3–137 in Krombein, K.V., Hurd, P.D., Smith, D.R. & Burks, B.D. (Eds.), *Catalog of Hymenoptera of America North of Mexico*, vol. 1. Smithsonian Institution Press, Washington.
- Smith, D.R.** 1991. Flight records for twenty-eight species of *Macrophya* Dahlbom (Hymenoptera: Tenthredinidae) in Virginia, and an unusual specimen of *M. epinota* (Say). *Proceedings of the Entomological Society of Washington*, 93: 772–775.
- Taeger, A. et al.** 1998. Kommentare zur Biologie, Verbreitung und Gefährdung der Pflanzenwespen Deutschlands (Hymenoptera, Symphyta). Pp. 49–135 in Taeger, A. & Blank, S.M. (Eds.), *Pflanzenwespen Deutschlands (Hymenoptera: Symphyta)*. Kommentierte Bestandsaufnahme. Goecke & Evers, Keltern.
- Wei, M. & Ma, L.** 1997. Five new species of *Macrophya* (Hymenoptera: Tenthredinomorpha: Tenthredinidae) from China. *Entomotaxonomia*, Wukung, 19 Supplement: 77–84.
- Westwood, J.O.** [1839]. *Synopsis of the genera of British insects*. Pp. 49–80 published with *Introduction to the modern classification of insects*, part 13 (vol. 2), pp. 257–288. Longman, Orme, Brown, Green & Longmans, London.
- Zhelochovtsev, A.N.** 1988. Pereponchatokrylye. Sestaja tchast. *Opredelitl' Nasekomych Evropejskoj tchasti SSSR*, Leningrad, 3(6): 3–237.

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